NORTH CENTRAL FOREST EXPERIMENT STATION
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FOREST AREA IN MINNESOTA, 1977[1]

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ABSTRACT.— Presents statistics on Minnesota's forest land area by county for 1977.

KEY WORDS: Commercial forest land, noncommercial forest land.

One out of every 3 acres in Minnesota is forested. These forested acres total 16.7 million acres in the State, almost 85 percent of which occur in a 17 county area in northern Minnesota encompassing the Aspen-Birch and Northern Pine Survey Units (fig. 1, table 4).

Forest land declines across Minnesota from 87 percent of all land in the northeast (Aspen-Birch Unit) to 3 percent of all land in the southwest (Prairie Unit). Cook County in northeast Minnesota is 99 percent forest, the most heavily forested county in the State.

Forest land, Statewide, declined 1.7 million acres or 9.4 percent between 1962 and 1977. A comparison of areas from the two inventories by geographical regions in the State shows that even more significant changes took place in certain sections of the State. The greatest reductions in forest area occurred in the Prairie and Central Hardwoods Units where the losses were 37 and 22 percent, respectively (table 1).

Commercial forests (land suitable for growing industrial timber products and not reserved from this use) now occupy 13.7 million acres or 82 percent of

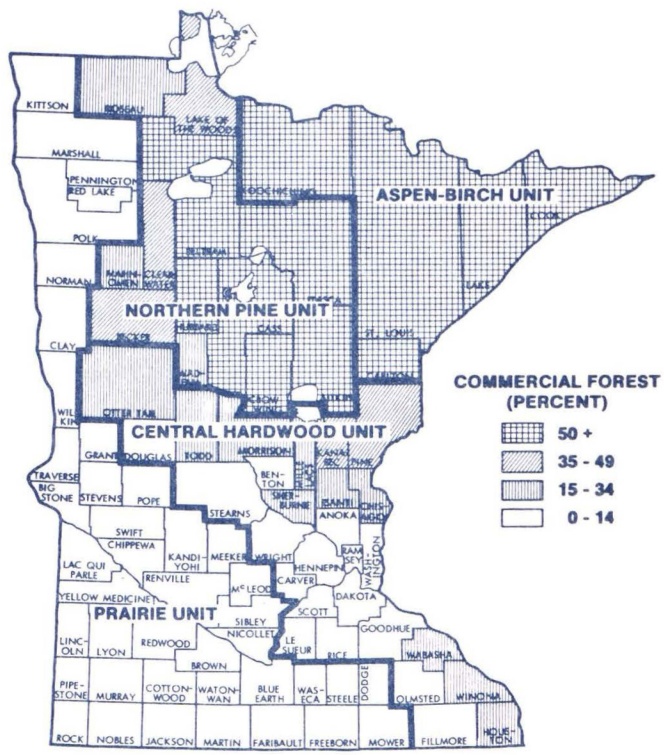

Figure 1.— *Commercial forest area as a percent of land area by county, Minnesota, 1977.*

Minnesota's forest land. Since the previous inventory in 1962, commercial forests have declined 1.7 million acres or 11 percent (table 2).

The patterns of change by geographical area follow those of total forest land except for the Aspen-Birch Unit. In this Unit, almost 500 thousand acres of forest land that formerly was classified as commercial

[1]*The sampling error of area for this survey was ±0.39 percent for the 13.7 million acres of commercial forest land. The fourth forest inventory of Minnesota was conducted by the North Central Forest Experiment Station and the Minnesota Department of Natural Resources.*

Table 1.— *Area of total forest land by Forest Survey Unit for 1962 and 1977, Minnesota*

Unit	Survey year 1962[1]	1977	Change since 1962	
	Thousand acres			*Percent*
Aspen-Birch	7,771	7,472	–299	–3.8
Northern Pine	7,004	6,512	–492	–7.0
Central Hardwood	2,748	2,144	–604	–22.0
Prairie	922	581	–341	–37.0
State total	18,445	16,709	–1,736	–9.4

[1]1962 areas have been adjusted to conform to 1977 statistics because of changes in procedures and definitions between surveys.

Table 2.— *Area of commercial forest land by Forest Survey Unit for 1962 and 1977, Minnesota*

Unit	Survey year 1962[1]	1977	Change since 1962	
	Thousand acres			*Percent*
Aspen-Birch	6,244	5,451	–793	–12.7
Northern Pine	6,025	5,759	–266	–4.4
Central Hardwood	2,360	1,951	–409	–17.3
Prairie	783	534	–249	–31.8
State total	15,412	13,695	–1,717	–11.1

[1]1962 areas have been adjusted to conform to 1977 statistics because of changes in procedures and definitions between surveys.

has been reclassified productive-reserved. This is due to the creation of the Voyageurs National Park and the addition of the Portal Zone to the reserved section of the Boundary Waters Canoe Area of the Superior National Forest.

Noncommercial forest land totaled 3 million acres in 1977 (table 3). Of this amount, 1.8 million acres is forest land too poor to grow timber products suitable for industrial use. The remaining 1.2 million acres are productive but reserved for uses other than timber production, such as parks and other reserved recreation areas. The decline in noncommercial forest land between inventories can be attributed to a drop in unproductive forest acres.

Table 3.— *Area of noncommercial forest land by Forest Survey Unit for 1962 and 1977, Minnesota*

Unit	Survey year 1962[1]	1977	Change since 1962	
	Thousand acres			*Percent*
Aspen-Birch	1,526	2,020	+494	+32.4
Northern Pine	979	754	–225	–23.0
Central Hardwood	388	193	–195	–50.3
Prairie	140	47	–93	–66.4
State Total	3,033	3,014	–19	–.6

[1]1962 areas have been adjusted to conform to 1977 statistics because of changes in procedures and definitions between surveys.

Table 4.—Area of land and forest land by county, Minnesota, 1977

County	All land[1]	Forest Land[2]			Commercial forest as a percent of land area	All forest as a percent of land area
		All forest	Non-commercial[3]	Commercial[4]		
	Thousand acres				*Percent*	
ASPEN-BIRCH UNIT						
Carlton	551.8	336.1	23.3	312.8	57	61
Cook	861.4	852.9	314.1	538.8	63	99
Koochiching	2,001.3	1,794.3	515.4	1,278.9	64	90
Lake	1,319.8	1,257.1	401.8	855.3	65	95
St. Louis	3,899.1	3,231.4	765.8	2,465.6	63	83
Total	8,633.4	7,471.8	2,020.4	5,451.4	63	87
NORTHERN PINE UNIT						
Aitkin	1,169.7	762.6	90.1	672.5	58	65
Becker	830.0	322.8	8.9	313.9	38	39
Beltrami	1,604.2	1,044.0	249.4	794.6	50	65
Cass	1,278.8	883.4	24.8	858.6	67	69
Clearwater	639.9	333.7	32.0	301.7	47	52
Crow Wing	636.5	380.7	8.8	371.9	58	60
Hubbard	596.2	403.2	5.2	398.0	67	68
Itasca	1,685.3	1,331.6	50.6	1,281.0	76	79
Lake of the Woods	838.8	596.1	235.5	360.6	43	71
Mahnomen	360.2	107.8	1.4	106.4	30	30
Roseau	1,072.8	232.6	40.7	191.9	18	22
Wadena	342.7	113.7	6.4	107.3	31	33
Total	11,055.1	6,512.2	753.8	5,758.4	52	59
CENTRAL HARDWOOD UNIT						
Anoka	271.0	42.9	6.3	36.6	14	16
Benton	257.4	28.3	2.2	26.1	10	11
Carver	229.9	12.3	1.9	10.4	5	5
Chisago	268.1	55.7	5.5	50.2	19	21
Dakota	368.4	19.5	3.0	16.5	5	5
Douglas	413.9	20.4	1.9	18.5	5	5
Fillmore	549.8	72.9	7.6	65.3	12	13
Goodhue	482.1	60.7	4.3	56.4	12	13
Hennepin	363.1	11.4	3.6	7.8	2	3
Houston	361.7	119.6	8.1	111.5	31	33
Isanti	280.6	54.1	7.2	46.9	17	19
Kanabec	335.1	134.5	5.5	129.0	39	40
LeSueur	281.6	11.4	1.4	10.0	4	4
Mille Lacs	365.6	136.2	13.4	122.8	34	37
Morrison	721.4	161.3	12.6	148.7	21	22
Olmsted	419.6	35.3	3.3	32.0	8	8
Otter Tail	1,255.9	200.5	14.2	186.3	15	16
Pine	904.7	477.6	52.0	425.6	47	53
Ramsey	99.0	.1	.1	—	—	—
Rice	317.6	14.1	2.0	12.1	4	4
Scott	225.7	16.3	2.7	13.6	6	7
Sherburne	275.8	62.3	5.4	56.9	21	23
Stearns	858.9	60.3	4.3	56.0	7	7
Todd	602.6	111.1	6.6	104.5	17	18
Wabasha	334.1	62.1	4.7	57.4	17	19
Washington	246.9	12.1	1.9	10.2	4	5
Winona	397.1	114.9	8.6	106.3	27	29
Wright	431.6	35.8	2.3	33.5	8	8
Total	11,919.2	2,143.7	192.6	1,951.1	16	18

(Table 4 continued on next page)

(Table 4, continued)

PRAIRIE UNIT

County	All land[1]	Forest Land[2]			Commercial forest as a percent of land area	All forest as a percent of land area
		All forest	Non-commercial[3]	Commercial[4]		
	Thousand acres				Percent	
Big Stone	313.8	2.7	.3	2.4	1	1
Blue Earth	471.3	23.6	2.2	21.4	5	5
Brown	390.3	10.7	1.6	9.1	2	3
Chippewa	372.2	4.0	.1	3.9	1	1
Clay	669.1	11.2	.9	10.3	1	2
Cottonwood	407.0	2.6	.1	2.5	1	1
Dodge	278.4	7.4	1.0	6.4	2	3
Faribault	455.1	6.5	.3	6.2	1	1
Freeborn	448.4	5.7	.9	4.8	1	1
Grant	349.6	3.0	.1	2.9	1	1
Jackson	445.5	2.3	.2	2.1	1	1
Kandiyohi	501.2	12.4	2.5	9.9	2	3
Kittson	719.0	71.9	4.4	67.5	9	10
Lac qui Parle	491.6	5.2	.6	4.6	1	1
Lincoln	339.8	2.2	.2	2.0	1	1
Lyon	453.5	5.3	.9	4.4	1	1
McLeod	312.3	6.1	.3	5.8	2	2
Marshall	1,145.1	142.7	14.2	128.5	11	13
Martin	450.1	3.8	.2	3.6	1	1
Meeker	396.3	12.0	1.2	10.8	3	3
Mower	449.9	6.1	.9	5.2	1	1
Murray	449.9	1.4	.3	1.1	—	—
Nicollet	276.7	13.7	1.4	12.3	4	5
Nobles	455.5	.7	—	.7	—	—
Norman	566.4	23.1	.9	22.2	4	4
Pennington	398.0	32.0	1.3	30.7	8	8
Pipestone	297.0	.4	—	.4	—	—
Polk	1,288.1	71.3	3.3	68.0	5	6
Pope	428.3	7.8	.9	6.9	2	2
Red Lake	276.5	28.9	1.7	27.2	10	11
Redwood	559.4	6.7	.5	6.2	1	1
Renville	626.3	8.0	.8	7.2	1	1
Rock	310.4	.5	—	.5	—	—
Sibley	373.2	11.9	1.0	10.9	3	3
Steele	272.3	5.6	.6	5.0	2	2
Stevens	357.2	1.0	—	1.0	—	—
Swift	473.2	5.0	.3	4.7	1	1
Traverse	363.7	.9	—	.9	—	—
Waseca	265.3	5.0	.4	4.6	2	2
Watonwan	276.9	1.1	—	1.1	—	—
Wilkin	481.1	.5	—	.5	—	—
Yellow Medicine	482.2	8.6	.8	7.8	2	2
Total	19,137.1	581.5	47.3	534.2	3	3
STATE TOTAL	50,744.8	16,709.2	3,014.1	13,695.1	27	33

[1]1970 Bureau of the Census estimates.

[2]Land at least 16.7 percent stocked by forest trees of any size, or formerly having such tree cover; excludes land currently developed for nonforest use such as urban or heavily settled residential or resort area, city parks, orchards, improved roads, or improved pasture land. The minimum forest area classified was 1 acre. Roadside, streamside, and shelterbelt strips of timber with a crown width of at least 120 feet and unimproved roads and trails, streams, and clearings in forested areas if less than 120 feet in width were classified as forest.

[3]Unproductive forest land incapable of yielding crops of industrial wood because of adverse site conditions, and productive public forest land withdrawn from commercial timber production through statute or administrative regulation.

[4]Forest land producing or capable of producing crops of industrial wood and not withdrawn from timber utilization by statute or administrative regulation.

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